



The Pilot's Manual

Private Pilot Syllabus

Eighth Edition | Meets Part 61 and 141 Requirements

A Flight & Ground Training Course for Private Pilot Airplane Certification
based on *The Pilot's Manual: Ground School*



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Certification based on *The Pilot's Manual: Ground School*

Includes an Appendix providing
Aviation Training Device (ATD)
integration with your existing
instructional methods



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The Pilot's Manual: Private Pilot Syllabus
Eighth Edition

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About This Syllabus

Course Objective

The objective of this syllabus is for the student to gain the necessary aeronautical skill, knowledge and experience to meet the requirements of a Private Pilot Certificate with an Airplane Category rating and a Single-Engine Land class rating.

Prerequisites

The student must be able to read, speak, and understand the English language, meet the physical standards for a third class medical certificate, and possess a valid student pilot certificate. Student must be 16 years old to solo, and 17 years old to gain certification.

Experience Requirements for a Private Pilot Certificate Include

35 hours of flight time (40 hours for Part 61 programs)

35 hours of ground training (No minimum time is specified for Part 61 programs.)

Note: Ground training consists of classroom + preflight + postflight briefings.

Private Pilot Certification Course

The Private License requires a demonstration of Aeronautical Knowledge, Risk Management, and Skill. This syllabus is written to satisfy 14 CFR Part 141 requirements. With the addition of 5 hours of flight, this syllabus will be equally effective for 14 CFR Part 61 programs. The syllabus is in four Stages, containing Modules. Each stage must be completed in ____ days, not to be more than 90 days. Each Module contains both a flight and ground lesson. This presents an integrated flight training process and will promote easier learning and a more efficient flight training program. Ideally, the ground lesson will be completed prior to the flight. Each flight lesson must include a pre- and post-flight briefing.

Testing Procedures

Each module contains a reading assignment associated with the ground training program. The review questions following each chapter will test the student's understanding of the material covered throughout the ground lesson, and must be answered prior to moving on to the next module. A Stage Exam is included with each stage, testing the student on both the ground and flight training material covered throughout the stage. This exam must be passed with a minimum score of 80%, and reconciled to 100%, in order to proceed to the next Stage.

It is essential that the objective of each module be accomplished before moving on to the next module.

Minimum Requirements

The time necessary for the syllabus to qualify for 141 operations includes meeting 35 hours of both ground and flight instruction (40 hours flight training for Part 61 programs). This is a *minimum* time—the national average for completion of the private certificate is 73 flight hours. Many factors play into the finishing flight time: frequency of flying, cooperative weather, airplane and instructor scheduling, and lapses in the flight training process. It is recommended the student fly at least twice a week. This type of schedule produces the most efficient training, and cuts down on review time. If there is a lapse in between flights, it may be necessary to review maneuvers; use the optional review flights accompanying each Stage for this purpose (this will allow the student to continue following the syllabus, which is necessary for a 141 program). The student should feel comfortable performing each task in all previous modules before progressing to the next stage. If student exceeds more than ____ hours of the minimum 141 recommended time allotted per module, the chief flight instructor must be informed.

Note to Instructors: Instructors are responsible for ensuring the completion standards have been. It may require multiple meetings and/or flights for the student to complete all tasks to the defined standards.

Instruction in a full flight simulator that meets the requirements of §141.41(a) may be credited for a maximum of 20% of the total flight training hours requirements of the approved course, or of this sections, whichever is less. Instruction in a flight training device that meets the requirement for §141.41(b) may be credited for a maximum of 15% of the total flight training hour requirement of the approved course, or of this sections, whichever is less. When a flight training device (FTD) is used, the ideal sequence is to learn in the flight training device (FTD) and practice in the airplane.

Required Materials for the Private Pilot Certification Course

- *The Pilot's Manual: Ground School* (ASA-PM-2)

Recommended Materials for the Private Pilot Certification Course

- *The Pilot's Manual: Flight School* (ASA-PM-1)
- FAA Private Pilot Airman Certification Standards (referred to as ACS) (ASA-ACS-6)
- ASA FAR/AIM (ASA-FR-AM-BK, updated annually)
- ASA *Private Pilot Test Prep* (ASA-TP-P, updated annually)
- ASA logbook (student's choice)
- ASA flight computer (manual E6B or electronic CX-3)
- ASA plotter (student's choice)
- ASA flight logs for cross-country flights (ASA-FP)
- ASA *Private Pilot Oral Exam Guide* (ASA-OEG-P)
- Sectional for local area
- Chart Supplement (previously Airport/Facility Directory or A/FD)

The syllabus uses The Pilot's Manual series *Ground School* textbook for the ground training program. The review following each chapter should be finished with the assigned reading. *Flight School*, also in The Pilot's Manual series, is recommended for use in enhancing the flight training program. Both books contain an index that will help pinpoint the material for the subject you are working on. ASA's *Private Pilot Test Prep* is also recommended to enhance the program. Use of the test prep will ensure the student is completely prepared for the FAA Knowledge Exam upon completion of the course. Instructors using this syllabus must ensure current FAA standards are upheld and that *Airplane Flying Handbook* (FAA-H-8083-3) procedures are maintained at all times.

If you have any questions on how to best use this syllabus, please email CFI@asa2fly.com. We will be happy to provide suggestions on how to tailor this syllabus to specifically meet your training needs.

Note to Instructors: Answers to the Stage Exams are available to instructors by contacting CFI@asa2fly.com.

Private Pilot Minimum Course Hours

For Part 141, Appendix B Compliance

These course hours are for student/instructor guidance only. They are a suggested time schedule which will ensure minimum flight and ground training compliance with 14 CFR Part 141.

Note: Ground Instruction should include classroom discussion, and pre- and post-flight briefings.

Page		Dual Flight	Solo Flight	Dual Cross-Country	Solo Cross-Country	Dual Night	Solo Night	Instrument Instruction	Ground Instruction ²
1	Stage 1								
2	Module 1	1.0							2.0
3	Module 2	1.0						.3	2.0
4	Module 3	1.0							1.5
5	Module 4	1.0						.3	1.5
6	Module 5	1.0 + Stage Check						.3	1.5 + Exam
7	<i>Review</i> ¹	1.0							1.5
9	Stage 2								
10	Module 1	1.0						.3	2.0
11	Module 2	1.0							2.0
12	Module 3	1.0						.3	1.5
13	Module 4	1.0							1.5
14	<i>Review</i> ¹	1.0							1.5
15	Module 5	.5	2.0						1.5 + Exam
17	Module 6	1.0 + Stage Check						.3	2.0
19	Stage 3								
20	Module 1	1.0	1.0					.3	1.5
22	Module 2		1.0*						1.5
23	Module 3	2.0		2.0				.3	2.0
24	<i>Review</i> ¹	1.5		1.5					1.0
25	Module 4		2.0		2.0				1.0
26	Module 5	1.0 + Stage Check	6.0*		6.0*				1.5 + Exam
29	Stage 4								
30	Module 1	1.0						.3	1.5
31	Module 2	3.0		1.5		3.0		.3	2.0
32	Module 3		2.0*		2.0		2.0		1.5
33	Module 4		1.0*						1.5
34	<i>Review</i> ¹	1.0							1.5
35	Module 5	1.5 + Stage Check						.3	2.0 + Exam
	TOTALS	20.0 + Stage Checks ³ 10 optional	5.0 ³ 10 optional	3.5	1 X/C more than 100 NM, 3 points	3.0	2.0	3.3	35.0 + Exams

¹ Reviews are not necessary to meet Part 141 compliance, and are not counted in the TOTALS for the program. They are optional, and should be used if the student is not ready to move on to the next module.

² Ground instruction consists of classroom + preflight + postflight briefings.

³ 14 CFR Part 141 requires 20 hours of dual flight, 5 hours of solo flight, and a total of 35 hours of flight time for the Private Pilot Certificate. Those flights tagged with an asterisk (*) indicate the flights which may be conducted either dual or solo, at the instructor's discretion.

These are the aeronautical knowledge subjects and flight tasks required for Part 141 compliance and where they are covered within this syllabus.

Part 141 Appendix B — Ground Training		Covered in Syllabus
1	Applicable Federal Aviation Regulations for private pilot privileges, limitations, and flight operations	Stage 1 Modules 4, 5
2	Accident reporting requirements of the National Transportation Safety Board	Stage 1 Module 5
3	Applicable subjects of the Aeronautical Information Manual and the appropriate FAA advisory circulars	Stage 1 Module 4
4	Aeronautical charts for VFR navigation using pilotage, dead reckoning, and navigation systems	Stage 2 Module 3, 5 Stage 3 Module 3, 4, 5
5	Radio communication procedures	Stage 2 Module 4
6	Recognition of critical weather situations from the ground and in flight, windshear avoidance, and the procurement and use of aeronautical weather reports and forecasts	Stage 2 Module 2 Stage 3 Module 2 Stage 4 Module 2, 3
7	Safe and efficient operation of aircraft, including collision avoidance, and recognition and avoidance of wake turbulence	Stage 1 Module 3, 4 Stage 2 Module 1 Stage 3 Module 1
8	Effects of density altitude on takeoff and climb performance	Stage 2 Module 1 Stage 3 Module 1
9	Weight and balance computations	Stage 2 Module 6 Stage 3 Module 2
10	Principles of aerodynamics, powerplants, and aircraft systems	Stage 1 Module 2, 4
11	Stall awareness, spin entry, spins, and spin recovery techniques	Stage 1 Module 4
12	Aeronautical decision making and judgment	Stage 1 Module 5 Stage 2 Module 2
13	Preflight actions that include (1) how to obtain information on runway lengths at airports of intended use, data on takeoff and landing distances, weather reports and forecasts, and fuel requirements; and (2) how to plan for alternatives if the planned flight cannot be completed or delays are encountered	Stage 3 Module 2

Part 141 Appendix B — Flight Training		Covered in Syllabus
35 hours of flight training		Stages 1-4, all modules
20 hours of dual instruction		Stage 1 Modules 1-5 Stage 2 Modules 1-6 Stage 3 Module 1, 3, 5 Stage 4 Modules 1, 2, 5
↳ 3 hours cross-country flight training		Stage 3 Module 3 Stage 4 Module 2
↳ 1 cross-country flight more than 100 NM total distance		Stage 4 Module 2
↳ 10 takeoffs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport		Stage 3 Module 3 Stage 4 Module 2
↳ 3 hours of flight training in preparation for the practical test within 60 days preceding the date of the test		Stage 4 Module 2 Stage 4 Module 5

Stage 1

Introduction to Flying

Objective

The objective of Stage 1 is for the student to become proficient in, and have an understanding of the following:



Ground Training

- Course objective
- School requirements, procedures, regulations
- Grading criteria
- Forces acting on an airplane
- Stability and control
- Training airplane (airframe, engine, systems, flight instruments)
- Basic flight maneuvers
- Flight information
- Flight physiology
- Regulations



Flight Training

- Flight training process
- Training airplane
- Preflight
- Taxiing
- Four basics of flight (straight and level, turns, climbs, descents)
- Use of sectional
- Collision avoidance
- Slow Flight
- Stall series
- Steep Turns
- Instrument scan

Completion Standards

Stage 1 is complete when the student achieves the objective of each lesson, and can list or describe the correct process or reference for accomplishing elements, exercises and activities. Student shall score at least 80% on the Stage 1 Exam, and all deficient areas shall be reconciled to 100%. Student shall have third-class medical and student pilot certificate upon completion of this stage.

Stage 1 / Module 1



Ground Training

Objective:

For the student to be introduced to the Private Pilot Certification program, and learn the flight school requirements, procedures, regulations, and grading criteria. Student shall also become familiar with stability, control, and the forces acting on an airplane.

Content:

- Review of course and objectives
- School requirements, procedures, regulations
- Grading criteria, expectations of student
- Review objective of Stage 1

The forces acting on an airplane

- Weight
- Lift
 - streamline/turbulent flow
 - Bernoulli's Principle
 - dynamic/static pressure
 - airspeed
 - airfoil shape
 - aerodynamic force
 - pressure distribution and CP movement
- Drag
 - total drag
 - parasite drag
 - skin-friction drag
 - form drag
 - interference drag
 - induced drag
 - angle-of-attack
 - wing design
 - lift/drag ratio
 - wing flaps
 - leading-edge devices
 - spoilers
- Thrust
 - propeller motion
 - forces on a propeller blade
 - propeller efficiency
 - controllable-pitch propellers
 - takeoff effects of propellers
 - propeller torque effect
 - gyroscopic effect
 - P-factor

Completion Standards:

This lesson is complete when the student has successfully completed all review questions following the assigned reading.

Assignment:

Ground School, Chapters 1 and 2



Flight Training

Objective:

For the student to be introduced to and become familiarized with preflight inspections, checklist operations, starting and taxi procedures, and the function and use of the airplane controls.

Content:

- Preflight inspection and aircraft documents (certificates and documents, aircraft logbooks, airplane servicing)
- Starting procedures
- Taxi
- Control effects on ground and in flight
- Checklist introduction and use
- Normal takeoff
- Four Basics: straight and level, climbs, descents, turns
- Collision avoidance procedures
- Normal approach and landing
- Postflight procedures

Completion Standards:

This lesson is complete when the student can conduct the preflight with minimum assistance, properly use all checklists, start the airplane, taxi, and operate the controls.

Recommended Reading:

Flight School

Minimum 141 Requirements

- Dual 1.0 hour flight
- 2.0 hours ground instruction

Stage 1 / Module 1

Date of Completion: _____

Signature: _____

Time Flown: _____

Stage 1 / Module 2



Ground Training

Objective:

For the student to have an understanding of the airplane's airframe, engine, and system.

Content:

Airframe

- Fuselage
- Wings
- Empennage
- Flight controls
- Landing gear
- Engine and propeller

Engine

- Description and principles
- Four-stroke engine cycle
- Ignition
- Starter
- Exhaust system
- Carburetor
- Accelerator pump
- Idling system
- Fuel/air mixture control
- Abnormal combustion
 - detonation
 - preignition
- Carburetor ice
 - impact ice
 - fuel ice
 - throttle ice
- Carburetor heat
- Fuel injection systems

Systems

- Fuel system
- Oil system
- Cooling system
- Electrical system
- Vacuum system

Completion Standards:

This lesson is complete when the student has successfully completed all review questions following the assigned reading.

Assignment:

Ground School, Chapters 4, 5, and 6



Flight Training

Objective:

For the student to become proficient with the four basics of flight: straight and level, climbs, turns, and descents; and collision avoidance procedures.

Content:

- Preflight
- Radio communications
- Normal takeoff and climbout
- Collision avoidance procedures
- Climbs
- Straight and level
- Turns: 90, 180, 360 degrees, and turns to headings
- Descents: with and without power and flaps
- Scanning procedures
- Normal approach and landing
- Postflight procedures

Completion Standards:

This lesson is complete when the student has an understanding of the four basics of flight, and can maintain altitude within 200 feet, airspeed within 20 knots, and heading within 20 degrees, while performing the maneuvers listed in the content of this module.

Recommended Reading:

Flight School

Minimum 141 Requirements

- Dual 1.0 hour flight, 0.3 instrument work
- 2.0 hours ground instruction

Stage 1 / Module 2

Date of Completion: _____

Signature: _____

Time Flown: _____

The Pilot's Manual

Private Pilot Syllabus

A Flight & Ground Training Course for Private Pilot Airplane Certification
based on *The Pilot's Manual Ground School*

This syllabus presents the most integrated and comprehensive flight training program available, along with many advantages:

- Based on The Pilot's Manual series. Schools, instructors, or students can choose to supplement the program with other texts, videos, etc. This allows freedom to teach or learn the material in the most effective way—on an individual basis.
- All Part 141 requirements have been met in a logical and user-friendly manner.
- Flight lessons are presented side-by-side with their coordinating ground lessons. This integrated approach provides the most efficient path to completion, and is easier to follow than separate ground and flight training programs.
- Flexible enough to be effective for all programs.
- Includes “Optional Reviews” in each stage—allowing the student to review material when necessary, yet still follow the syllabus and maintain progress.
- Appendix provides ATD integration with your existing instructional methods.
- Every syllabus in the series includes:
 - Instructor endorsements
 - All Stage Exams needed for the program
 - Airman Certificate Rating Application and checkride checklist

Eighth Edition

**Meets Part 61 and 141
Requirements**

All curriculums for The Pilot's Manual series are also available as free downloads from the ASA website:

Private Pilot Syllabus

Instrument Rating Syllabus

Commercial Pilot Syllabus

Flight Instructor Syllabus

**Flight Instructor Instrument
Syllabus**



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